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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,783	03/09/2004	Marc Bernard	15675P516	4142
8791	7590	12/13/2005	EXAMINER	
BLAKELY SOKOLOFF TAYLOR & ZAFMAN			NGUYEN, HUNG T	
12400 WILSHIRE BOULEVARD			ART UNIT	PAPER NUMBER
SEVENTH FLOOR				
LOS ANGELES, CA 90025-1030			2636	

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/797,783	BERNARD ET AL.	
	Examiner	Art Unit	
	HUNG T. NGUYEN	2636	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 21 November 2005.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-8 and 16-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-8 and 16-22 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 09 March 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because it contains more than 150 words and please submit a new abstract less than 150 words in a separate sheet. Correction is required. See MPEP § 608.01(b).
2. The Drawings 1-3 are objected, applicant must label --Prior Art-- as replacement sheets.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-8 & 16-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the airflow" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the longitudinal" in lines 4-5. There is insufficient antecedent basis for this limitation in the claim.

In claim 1, line 3, "a surface" will be changed to --said surface--;

Claim 1 recites the limitation "the measurement" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the direction" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 16 recites the limitation "the quantity" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 19 recites the limitation "the speed" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 19 recites the limitation "the analysis" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 19 recites the limitation "the decline" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

Claim 20 recites the limitation "the whole duration" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 20 recites the limitation "said alarm signal" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-6 & 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morton et al. (U.S. 2,766,619).

Regarding claim 1, Morton discloses an ice detector (1) for detecting ice accretion on a surface of an aircraft which having sensing element protruding into an airflow and supported to the surface by a strut, the sensing may measure and detect droplet [figs.1-3, col.1, line 68 to col.2, lines 13 and col.8, lines 16-28].

The reference of Morton does not specifically mention exactly the words as evolution profile as claimed by the applicant.

However, Morton does teach the ice detector may indicate the presence of ice and the rate of increase and decrease of the ice by means of measuring the heat of fusion given up by the water as it freezes and adheres to a portion of the detector [col.1,lines 24-29].

Therefore, it would have been obvious to one having ordinary skill in the art to employ the system of Morton to measure, detect and de-ice any droplet stay on the surface of an aircraft.

Regarding claim 2, Morton discloses the ice detector (1) having the sensing device has a circular object is cited in figs.1-3.

Regarding claims 3-6 & 8, Morton discloses the ice detector (1) having the sensing device has a circular object is cited in figs.1-3. Others shapes or dimensions are obvious design choice of the skilled artisan and well known.

6. Claims 7 & 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morton et al. (U.S. 2,766,619) in view of Stallabrass et al (U.S. 3,940,622).

Regarding claim 7, The reference of Morton does not specifically mention the detector may identify the icing condition encountered as claimed by the applicant.

Stallabrass teaches an icing detector to provide a measure of icing severity or ambient liquid water content and warning signal is given to the pilot as the icing encounter [col.1, lines 41-50 and col.2, lines 51-63]:

Therefore, it would have been obvious to one having ordinary skill in the art to have the teaching of Stallabrass in the system of Morton to give the pilot early warning signal of an icing encounter so that he or she may take the necessary precautionary action.

Regarding claim 20, Stallabrass teaches an icing detector to provide a measure of icing severity or ambient liquid water content and warning signal is given to the pilot as the icing encounter [col.1, lines 41-50 and col.2, lines 51-63].

Regarding claim 21, Both Morton & Stallabrass do not specifically teach that a circuit as a first power supply for the de-icing of the strut and a second power supply for the sensing as claimed by applicant.

Stallabrass teaches an icing detector and probe heater (66) is powered by power supply (65) [fig.6, col.5, lines 55 to col.6, line 3] without mention the second power supply because that is more expensive to the customer or that is obvious design choice of the skilled artisan.

Therefore, it would have been obvious to one having ordinary skill in the art to have the teaching of Stallabrass in the system of Morton to perform the same function as desired.

Regarding claim 22, Stallabrass teaches an icing detector and probe heater (66) is powered by power supply (65) [fig.6, col.5, lines 55 to col.6, line 3].

7. Claims 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morton et al. (U.S. 2,766,619) in view of Severson et al. (EP 1,54,833).

Regarding claims 16-18, Morton does not specifically teach that the strut comprises a shape as deflector / flat surface and round concave as claimed by applicant.

Severson teaches inflight ice detector to distinguish supercooled large droplet icing as the droplets are entrained in the airflow that enters the narrow flow channel (70) have different trajectories when they move into the constricted flow channel (70) as a function of their size [col.8, line 53 col.9, line 13].

Therefore, it would have been obvious to one having ordinary skill in the art to employ the teaching of Severson in the system of Morton to provide an accurate detection of ice accretion.

Regarding claim 19, Morton does not specifically teach that the ice detector may determine by speed at ice accretes and analysis of the slope curve represent the decline of the sensing element as claimed by applicant.

Severson teaches inflight ice detector to distinguish supercooled large droplet icing which to provide at least two probes to detect from all sizes of water droplets in the airflow and also the other one to collect supercooled large droplets [col.12, lines 31-46, col.4, lines 39-45, col.6, lines 30-44].

Therefore, it would have been obvious to one having ordinary skill in the art to utilize the teaching of Severson in the system of Morton to detect both small droplets and large droplets in more sensitive and in effective way.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Burns et al. (U.S. 6,052,056).
- Cronin et al. (U.S. 6,320,511).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung T. Nguyen whose telephone number is (571) 272-2982. The examiner can normally be reached on Monday to Friday from 8:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hofsass, Jeffery can be reached on (571) 272-2981. The fax phone number for this Group is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.

**HUNG NGUYEN
PRIMARY EXAMINER**


Examiner: Hung T. Nguyen

Date: Dec. 9, 2005